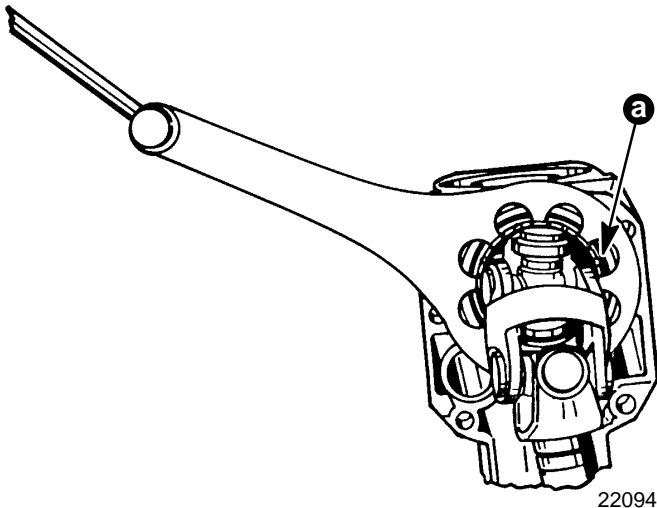


TO: SERVICE MANAGER TECHNICIANS
PARTS MANAGER

No. 88-1

Torquing Bravo One U-Joint Bearing Retainer Nut

Torque U-Joint bearing retainer to 200 lbs. ft. (271 N.m). Use the following procedure to allow torquing retainer with a torque wrench.



a - Retainer

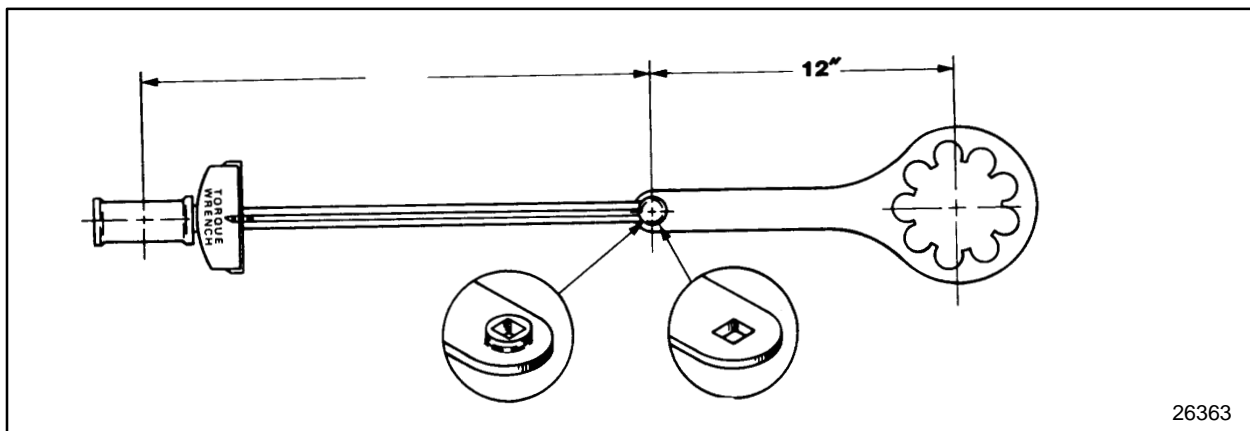
U-Joint Bearing Retainer Wrench (91-36235) Modification

1. Machine a 1/2 in. (12.7mm) square in Retainer Wrench 91-36235, at location shown. Square MUST BE machined so that torque wrench will be in-line with Retainer Wrench. Square can be made with conventional tools by first drilling a 7/16 in. (11 mm) hole and then squaring out the corners with a file.

NOTE: A square can also be placed in retainer wrench by grinding off a 1/2 in. drive socket and welding the drive end to the wrench. This method will provide a more durable connection.

Torquing Retainer Nut

1. Measure length of torque wrench as follows:
 - a. On beam-type torque wrenches, measure from square drive to fulcrum (pivot) point of handle.
 - b. On click-stop or dial type torque wrenches, measure from square drive to reference mark on handle (2 hands, etc.)



a - Torque Wrench Length

2. Torque wrench reading will be less than actual torque being applied to retainer, due to torque reading being taken thru retainer wrench. Use the following chart to determine torque wrench reading required to properly torque retainer.

TORQUE CONVERSION CHART

Torque Wrench Length "A" in Inches (mm)	Torque Wrench Reading in Lbs. Ft. (N.m) to Achieve 200 Lbs. Ft. (271 N.m) on Nut
15 (381)	111 (151)
16 (406)	114 (155)
17 (432)	117 (159)
18 (457)	120 (163)
19 (483)	123 (167)
20 (508)	125 (170)
21 (533)	127 (172)
22 (559)	129 (175)
23 (584)	131 (178)
24 (610)	133 (180)
25 (635)	135 (183)
26 (660)	136 (184)
27 (686)	138 (187)
28 (711)	140 (190)
29 (737)	141 (191)
30 (762)	143 (194)
31 (787)	144 (195)
32 (813)	145 (197)
33 (838)	147 (200)
34 (864)	148 (201)
35 (889)	149 (202)
36 (914)	150 (203)

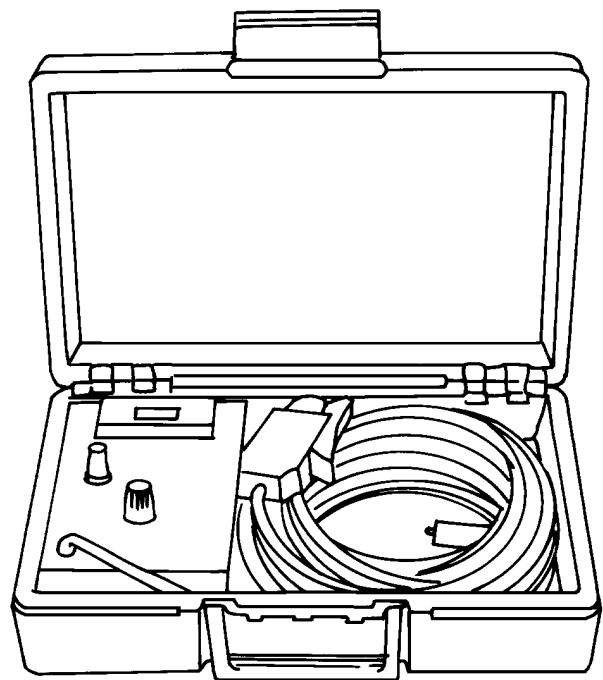
3. Torque retainer until prescribed reading is attained on torque wrench.

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